First Year in Maths NSW
Friday 3rd July 2015

University of Western Sydney, Parramatta South campus
Building EB, room EB.G.05

9:30–10:00	Registration, tea/coffee
10:00–11:00	**John Mack** What the HSC can tell us about maths and science backgrounds of school-leavers, above and beyond the ATAR
11:00–11:30	**John Rice** Introducing FYiMaths
11:30–12:15	**Jonathan Kress and Collin Zheng** Technology in teaching: Maple TA and short online videos
12:15–2:00	Lunch
2:00–2:30	**David Easdown** Engaging students with little or no mathematical experience in tertiary mathematics
2:30–3:00	**Mary Coupland** Mastery Testing as part of assessment at UTS: joys and pitfalls
3:00–3:30	**John Rice** Galileo and calculus
3:30–4:00	Afternoon tea
4:00–4:30	**Panel led by Don Shearman** I've worked by arse off all semester, now has it had any effect? Research in maths education
4:30–5:00	Workshop and discussion: the future of FYiMaths NSW
6:00–late	Dinner: Thai Garden House, 526 Church St, Nth Parramatta

Abstracts for invited speakers

John Mack: What the HSC can tell us about maths and science backgrounds of school-leavers, above and beyond the ATAR

Right from the introduction in 1976 of a single measure of academic preparedness derived from HSC results via 'scaling', there was no intention that this measure, alone, was necessarily a sufficient single predictor of first-year success at university. Various degrees or whole faculties commonly specified prerequisite requirements or additional selection criteria as part of a normal admission. As general confidence in the use of the single criterion developed and also because of competition for school-leaver admissions intensified post the Dawkins reforms of higher education around 1990, admissions criteria were generally weakened via the dropping of prerequisites or by replacing them with 'assumed knowledge' specifications and these latter have, it seems to me, been steadily eroded via various pathways including special entry schemes. The upshot has generally meant more work for those helping first year maths/science students to pass and a greater risk of failure in such units for students coming in without a realistic competence in these subjects.

Is any relief in sight? Frankly, no, unless uni fees are substantially increased (making the cost of failure much higher for the student but not necessarily for the institution) or there is an abrupt and unexpected alteration in the ways in which HSC students choose their HSC subject combinations very soon. I shall present data showing why this is unlikely and suggest that it is more the responsibility of the higher education sector than the school sector to take steps that might improve this situation.

John Rice: FYiMaths

First Year in Maths (FYiMaths) is a new national mathematics network revolving around, but by no means limited to, first year teaching. It is concerned with all aspects of the professional and organisational environment within which people teach, not only ideas about teaching. It will work with its membership, and with Deans Councils and DVC's Academic, in order to identify and prosecute important issues in university mathematics teaching, and anything that affects it.